Impact of ticagrelor monotherapy on two-year clinical outcomes in patients with long stenting: a post hoc analysis of the GLOBAL LEADERS trial

Takahashi, Kuniaki ; Chichareon, Ply ; Modolo, Rodrigo ; Kogame, Norihiro ; Chang, Chun Chin ; Tomaniak, Mariusz ; Moschovitis, Aris ; Curzen, Nick ; Haude, Michael ; Jung, Werner ; Holmvang, Lene ; Garg, Scot ; Tijssen, Jan G P ; Wykrzykowska, Joanna J ; de Winter, Robbert J ; Hamm, Christian ; Steg, Philippe Gabriel ; Stoll, Hans-Peter ; Onuma, Yoshinobu ; Valgimigli, Marco ; Vranckx, Pascal ; Windecker, Stephan ; Serruys, Patrick W

Abstract: Aims: The aim of this study was to evaluate the impact of a novel antiplatelet regimen in patients with increasing total stent length (TSL). Methods and results: This is a post hoc analysis of the GLOBAL LEADERS trial, a prospective, multicentre, open-label, randomised trial, investigating the impact of the experimental strategy (one-month dual antiplatelet therapy [DAPT] followed by 23-month ticagrelor monotherapy) versus the reference regimen (12-month DAPT followed by 12-month aspirin monotherapy) in patients with a Biolimus A9-eluting stent (BES). The primary endpoint was the composite of all-cause death and new Q-wave myocardial infarction (MI), and the secondary endpoint was Bleeding Academic Research Consortium (BARC) type 3 or 5 bleeding at two years. To investigate the association between total stent length and outcomes, groups were compared in quartiles according to TSL; the fourth quartile group was at significantly higher ischaemic risk at two years. In that stratum (TSL 46 mm), the experimental strategy significantly reduced the risk of the primary endpoint (hazard ratio [HR] 0.67, 95% confidence interval [CI]: 0.49-0.90; pinteraction=0.043), while demonstrating a similar risk of BARC type 3 or 5 bleeding (HR 0.99, 95% CI: 0.66-1.49; pinteraction=0.975). Conclusions: Ticagrelor monotherapy could potentially balance ischaemic and bleeding risks, thereby achieving a net clinical benefit in patients with a TSL 46 mm with a BES.

DOI: https://doi.org/10.4244/eij-d-19-00498

CORONARY INTERVENTIONS

Impact of ticagrelor monotherapy on two-year clinical outcomes in patients with long stenting: a post hoc analysis of the GLOBAL LEADERS trial

EuroIntervention 2020;16:634-644. DOI: 10.4244/EIJ-D-19-00498

Kuniaki Takahashi[1], MD; Ply Chichareon[1,2], MD; Rodrigo Modolo[1,3], MD; Norihiro Kogame[1], MD; Chun Chin Chang[4], MD; Mariusz Tomaniak[4,5], MD; Aris Moschovitis[6], MD; Nick Curzen[7], BM (Hons), PhD; Michael Haude[8], MD; Werner Jung[9], MD; Lene Holmvang[10], MD, DMSc; Scot Garg[11], MD, PhD; Jan G.P. Tijssen[1,12], PhD; Joanna J. Wykrzykowska[1], MD, PhD; Robbert J. de Winter[1], MD, PhD; Christian Hamm[13], MD; Philippe Gabriel Steg[14], MD; Hans-Peter Stoll[15], MD; Yoshinobu Onuma[16], MD, PhD; Marco Valgimigli[17], MD, PhD; Pascal Vranckx[18], MD, PhD; Stephan Windecker[17], MD; Patrick W. Serruys[16], MD, PhD

1. Academic Medical Center, University of Amsterdam, Amsterdam, the Netherlands; 2. Division of Cardiology, Department of Internal Medicine, Faculty of Medicine, Prince of Songkla University, Songkhla, Thailand; 3. Department of Internal Medicine, Cardiology Division, University of Campinas (UNICAMP), Campinas, Brazil; 4. Department of Interventional Cardiology, Thoraxcenter, Erasmus Medical Center, Rotterdam, the Netherlands; 5. First Department of Cardiology, Medical University of Warsaw, Warsaw, Poland; 6. Tiefenauspital, Bern, Switzerland; 7. University Hospital Southampton, Southampton, and Faculty of Medicine, University of Southampton, Southampton, United Kingdom; 8. Städtische Kliniken Neuss, Lukaskrankenhaus GmbH, Neuss, Germany; 9. Schwarzwald-Baar Klinikum, Villingen-Schwenningen, Germany; 10. Copenhagen University Hospital – Rigshospitalet, Copenhagen, Denmark; 11. Royal Blackburn Hospital, Blackburn, United Kingdom; 12. Cardialysis B.V., Rotterdam, the Netherlands; 13. Kerckhoff Campus, University of Giessen, Bad Nauheim, Germany; 14. FACT (French Alliance for Cardiovascular Trials), Université Paris-Diderot, Paris, France; 15. Biosensors Clinical Research, Morges, Switzerland; 16. Department of Cardiology, National University of Ireland, Galway, Ireland; 17. Department of Cardiology, University of Bern, Inselspital, Bern, Switzerland; 18. Jessa Ziekenhuis, Faculty of Medicine and Life Sciences at the Hasselt University, Hasselt, Belgium

Aims: The aim of this study was to evaluate the impact of a novel antiplatelet regimen in patients with increasing total stent length (TSL).

Methods and results: This is a post hoc analysis of the GLOBAL LEADERS trial, a prospective, multicentre, open-label, randomised trial, investigating the impact of the experimental strategy (one-month dual antiplatelet therapy [DAPT] followed by 23-month ticagrelor monotherapy) versus the reference regimen (12-month DAPT followed by 12-month aspirin monotherapy) in patients with a Biolimus A9-eluting stent (BES). The primary endpoint was the composite of all-cause death and new Q-wave myocardial infarction (MI), and the secondary endpoint was Bleeding Academic Research Consortium (BARC) type 3 or 5 bleeding at two years. To investigate the association between total stent length and outcomes, groups were compared in quartiles according to TSL; the fourth quartile group was at significantly higher ischaemic risk at two years. In that stratum (TSL ≥46 mm), the experimental strategy significantly reduced the risk of the primary endpoint (hazard ratio [HR] 0.67, 95% confidence interval [CI]: 0.49-0.90;

0.66-1.49; $p_{interaction}$=0.975).

Conclusions: Ticagrelor monotherapy could potentially balance ischaemic and bleeding risks, thereby achieving a net clinical benefit in patients with a TSL ≥46 mm with a BES.

acs/nste-acs adjunctive pharmacotherapy drug-eluting stent stable angina

Read next article

Bioresorbable vascular scaffold versus metallic drug-eluting stent in patients at high risk of restenosis: the COMPARE-ABSORB randomised clinical trial

RELATED ISSUE

Volume 16 Number 8

› VIEW CONTENTS

TOOLBOX

Print article

Citations

Ask for a reprint

Request permissions

METRICS

Dimensions Badge

4	Total citations
4	Recent citations
n/a	Field Citation Ratio
n/a	Relative Citation Ratio

Altmetric

Twitter (15)

Mendeley (4)

POPULAR THIS MONTH

An EAPCI Expert Consensus Document on Ischaemia with Non-Obstructive Coronary Arteries in Collaboration with European Society of Cardiology Working Group on Coronary Pathophysiology & Microcirculation Endorsed by Coronary Vasomotor Disorders International Study Group.
Vijay Kunadian et al

Impact of the COVID-19 pandemic on interventional cardiology practice: results of the EAPCI survey
Marco Roffi et al

Double-kissing culotte technique for coronary bifurcation stenting
Gabor G. Toth et al

2018 ESC/EACTS Guidelines on myocardial revascularization
Franz-Josef Neumann et al

Percutaneous recanalisation of chronic total occlusions: 2019 consensus document from the EuroCTO Club
Alfredo R. Galassi et al

LATEST NEWS

NEW ISSUE

Radiation protection, ticagrelor monotherapy, the COMPARE-ABSORB trial, the BASILICA technique...

NOVEMBER 12, 2020

NEW

Impact of Pulmonary Ridge Coverage after Left Atrial Appendage Occlusion

NOVEMBER 18, 2020

NEW

Invasive assessment of a myocardial bridge

NOVEMBER 4, 2020

EDITORIAL

ASA-free strategy in ACS

Usman Baber

NOVEMBER 12, 2020

Popular Tavi-A, TAILOR-PCI, ATPCI, PORTICO-IDE and more

(Thanks to the support of Biotronik)

NOVEMBER 12, 2020

GUIDANCE PAPERS

Guidelines, consensus & position papers

AUGUST 28, 2020

EDITORIAL

Bioresorbable scaffold déjà vu

Dean J. Kereiakes

NOVEMBER 4, 2020

CORONARY

Percutaneous coronary intervention for bifurcation coronary lesions: the 15th consensus document from the European Bifurcation Club

Burzotta F et al

Supporting evidence for ST-segment elevation myocardial infarction from optical coherence tomography

Satogami K et al

One-step anatomic and function testing by cardiac CT versus second-line functional testing in symptomatic patients with coronary artery stenosis: head-to-head comparison of CT-derived fractional flow reserve and myocardial perfusion imaging

Westra J et al

VALVULAR DISEASE

Fatal Acute Mesenteric Ischemia Following Transcatheter Aortic Valve Replacement

del Val D et al

Clinical Impact of Intervention Strategies after failed Transcatheter Mitral Valve Repair

Alessandrini H et al

Percutaneous mitral valve leaflet repair: ongoing directions and future perspectives

Maisano F, Taramasso M

HEART FAILURE

The EURO SHOCK Trial: Design, Aims and Objectives Randomised comparison of Extra Corporeal Membrane Oxygenation (ECMO) delivered after acute-PCI plus standard of care versus standard of care alone after acute PCI, in patients presenting with Acute Coronary syndrome and Cardiogenic Shock.
Banning A et al

Percutaneous mitral valve leaflet repair: ongoing directions and future perspectives
Maisano F, Taramasso M

Deep Sedation versus General Anaesthesia for Transcatheter Mitral Valve Repair: An Individual-Patient Data Meta-analysis of Observational Studies.
Jobs A et al

PERIPHERAL

Multistage Strategy With Perfusion SPECT and CT Pulmonary Angiogram in Balloon Pulmonary Angioplasty for Totally Occluded Lesions in CTEPH
Hosokawa K et al

EAPCI Core Curriculum for Percutaneous Cardiovascular Interventions (2020): Committee for Education and Training European Association of Percutaneous Cardiovascular Interventions (EAPCI) A branch of the European Society of Cardiology
Van Belle E et al

Fistula between the right pulmonary artery and left atrium in a newborn: management and successful interventional treatment.
Michalak K et al

HYPERTENSION

EAPCI Core Curriculum for Percutaneous Cardiovascular Interventions (2020): Committee for Education and Training European Association of Percutaneous Cardiovascular Interventions (EAPCI) A branch of the European Society of Cardiology
Van Belle E et al

Early Results of the Revivent TC Procedure for Treatment of Left Ventricular Aneurysm and Heart Failure due to Ischemic Cardiomyopathy
Wang Y et al

Pulmonary artery denervation using catheter-based ultrasonic energy
Rothman A et al

STROKE

Impact of Pulmonary Ridge Coverage after Left Atrial Appendage Occlusion
Freixa X et al

Heterogeneity of debris captured by cerebral embolic protection filters during TAVI
Kroon H et al

First-in-human results of the OMEGA™ Left Atrial Appendage Occluder for Patients with Non-Valvular Atrial Fibrillation
Willkins P et al


About the journal

Editorial team

Disclaimer

Privacy policy

Readers

Current issue

Archives

Subscribe

Authors

Submit your paper

Instructions

Services

Advertise

Reprints / ePrints

Rights and permissions

Textbooks

The PCR-EAPCI textbook

The history of angioplasty

Percutaneous cardiac interventions

Coronary stenosis

Follow us

Facebook

Twitter

Impact factor: 3.993
2019 Journal Citation Reports ®
Science Edition (Clarivate Analytics, 2020)
Online ISSN 1969-6213 - Print ISSN 1774-024X